WHAT IS CLAIMED IS:

1. An optical pickup device comprising:

an objective lens for condensing a light beam on an optical disk;

a lens holding body for holding the objective lens;

a support body for supporting the lens holding body so as to allow the lens holding body to move in at least one of a focusing direction and a tracking direction of the objective lens; and

an optical base which is capable of moving in a radial direction of the optical disk and which holds the support body so as to allow the support body to rotate around a rotation axis perpendicular to the focusing direction and the tracking direction.

2. An optical pickup device according to Claim 1, wherein the support body is rotatably supported by at least two support points on an upper surface of the optical base on an optical disk side.

3. An optical pickup device according to Claim 2, wherein the support body is supported by the optical base such that the lens holding body is situated inside the optical base.

4. An optical pickup device according to Claim

2, wherein the objective lens is arranged on the rotation axis connecting the support points or in the vicinity of the rotation axis.

5. An optical pickup device according to Claim 1, further comprising a mirror provided on the optical base and adapted to reflect light, which is emitted in parallel to the optical disk from a light source, in a direction perpendicular to the optical disk, wherein the support points are arranged such that the rotation axis connecting the support points is situated between an optical path extending from the light source to the mirror and a lower surface of a cartridge housing the optical disk.

6. An optical pickup device according to Claim 1, wherein the lens holding body has a coil firmly attached thereto for moving the objective lens in at least one of the focusing direction and the tracking direction, and wherein the support body has a magnet fixed thereto for applying a magnetic field to the coil.

7. An optical pickup device according to Claim 6, wherein the support body is composed of a support member for supporting the lens holding body so as to allow the lens holding body to move in at least one

of the focusing direction and the tracking direction of the objective lens; and a base member fixedly supporting the support member and the magnet.

8. An optical pickup device according to Claim 7, wherein at least a part of the base is constituted of a yoke forming a magnetic circuit together with the magnet.

9. An optical pickup device according to Claim 1, wherein the optical base is mounted with a motor and a drive member which is in contact with the support body and which converts a torque of the motor to a driving force for vertically moving a part of the support body, the support body being rotated around the rotation axis by vertically moving the part of the support body.

10. An optical pickup device according to Claim 9, wherein the motor is arranged such that its rotation shaft is parallel to a radial direction of the optical disk, and wherein the drive member is arranged in a direction perpendicular to the radial direction of the optical disk.

11. An optical pickup device according to Claim 10, wherein the drive member is arranged on a side

portion of the optical base.

12. An optical pickup device according to Claim 9, wherein the drive member converts the torque of the motor to a reciprocating motion in a tangential direction of the optical disk, and wherein the drive member has at an end thereof an inclined portion for converting the reciprocating motion to a vertical motion, with the inclined portion being in contact with the part of the support body.

13. An optical pickup device according to Claim 9, wherein a first gear is provided at a forward end of the rotation shaft of the motor, and wherein the drive member has at one end a second gear connected to the first gear and at the other end an eccentric cam in contact with the one end of the support member, with the eccentric cam being in contact with the part of the support body.

14. An optical pickup device according to Claim 1, wherein at least one of the support points allows height adjustment in an optical axis direction of the objective lens.

15. An optical disk recording-reproducing apparatus equipped with an optical pickup device according to Claim 1.